



Complete Summary

GUIDELINE TITLE

Practice management guidelines for small bowel obstruction.

BIBLIOGRAPHIC SOURCE(S)

EAST Practice Parameter Workgroup for Management of Small Bowel Obstruction. Practice management guidelines for small bowel obstruction. Chicago (IL): Eastern Association for the Surgery of Trauma (EAST); 2007. 42 p. [80 references]

GUIDELINE STATUS

This is the current release of the guideline.

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SCOPE

DISEASE/CONDITION(S)

Small bowel obstruction

GUIDELINE CATEGORY

Management
Treatment

CLINICAL SPECIALTY

Critical Care
Emergency Medicine
Family Practice

Gastroenterology
Internal Medicine
Surgery

INTENDED USERS

Advanced Practice Nurses
Nurses
Physician Assistants

GUIDELINE OBJECTIVE(S)

To provide practice management guidelines for small bowel obstruction

TARGET POPULATION

Adults and children with small bowel obstruction

INTERVENTIONS AND PRACTICES CONSIDERED

Diagnosis

1. Assessment of clinical markers
2. Physical exam
3. Plain film radiographs
4. Computed tomography
5. Magnetic resonance imaging
6. Ultrasound
7. Contrast studies (nonionic low osmolar weight contrast as an alternative to barium)

Management

1. Non-operative management
2. Water soluble contrast
3. Surgery
4. Laparoscopic treatment

MAJOR OUTCOMES CONSIDERED

- Success rate
- Morbidity and mortality rates

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

A computerized search of the National Library of Medicine MEDLINE database was undertaken using the PubMed Entrez interface. English language citations during the period of 1991 through 2006 using the primary search strategy: intestinal obstruction[mh] AND intestine, small[mh] AND humans[mh] NOT (case reports[pt] OR letter[pt] OR comment[pt] OR news[pt]) Review articles were also excluded. The PubMed Related Articles algorithm was also employed to identify additional articles similar to the items retrieved by the primary strategy.

NUMBER OF SOURCE DOCUMENTS

Of approximately 550 articles identified, those dealing with either prospective or retrospective studies examining small bowel obstruction were selected, comprising 131 institutional studies evaluating diagnosis and management of adult patients with suspected or proven small bowel obstruction.

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Class I: Prospective, randomized, controlled trial

Class II: Clinical studies in which the data was collected prospectively, and retrospective analyses which were based on clearly reliable data. Types of studies so classified include: observational studies, cohort studies, prevalence studies, and case control studies.

Class III: Studies based on retrospectively collected data. Evidence used in this class includes clinical series, database or registry reviews, large series of case reviews, and expert opinion.

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review with Evidence Tables

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

The articles were reviewed by a group of eleven trauma/critical care surgeons who collaborated to produce this practice management guideline. (See table in the original guideline document).

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Level 1: This recommendation is convincingly justifiable based on the available scientific information alone. It is usually based on Class I data, however, strong Class II evidence may form the basis for a level 1 recommendation, especially if the issue does not lend itself to testing in a randomized format. Conversely, weak or contradictory Class I data may not be able to support a level 1 recommendation.

Level 2: This recommendation is reasonably justifiable by available scientific evidence and strongly supported by expert critical care opinion. It is usually supported by Class II data or a preponderance of Class III evidence.

Level 3: This recommendation is supported by available data but adequate scientific evidence is lacking. It is generally supported by Class III data. This type of recommendation is useful for educational purposes and in guiding future studies.

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Not stated

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Not applicable

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

The levels of recommendation (1-3) and classes of evidence (I-III) are defined at the end of the "Major Recommendations" field.

Diagnosis

1. All patients being evaluated for small bowel obstruction (SBO) should have plain films due to the fact that plain films are as sensitive as computed tomography (CT) to differentiate obstruction vs. non-obstruction. **Level III**
2. All patients with inconclusive plain films for complete or high grade SBO should have a CT as CT scan gives incremental information over plain films in regard to differentiating grade of obstruction and etiology of small bowel obstruction leading to changes in planned management. **Level I**

3. Multiple signs on CT suggesting strangulation should suggest a low threshold for operative intervention. **Level II**
4. Magnetic resonance imaging (MRI) and ultrasound are an alternative to CT with similar sensitivity and identification of etiology, but have several logistical limitations. **Level III**
5. There is a variety of literature that contrast studies should be considered in patients who fail to improve after 48 hours of conservative management as a normal contrast study can rule out operative small bowel obstruction. **Level II**
6. Nonionic low osmolar weight contrast is an alternative to barium for contrast studies to evaluate for SBO for diagnostic purposes. **Level I**

Management

1. Patients with plain film finding of small bowel obstruction and clinical markers (fever, leukocytosis, tachycardia, metabolic acidosis and continuous pain) or peritonitis on physical exam warrant exploration. **Level I**
2. Patients without the above mentioned clinical picture, and a partial SBO or a complete SBO can undergo non-operative management safely; although, complete obstruction has a higher level of failure. **Level I**
3. Patients without resolution of their SBO by day 3-5 of non-operative management should undergo water soluble study or surgery. **Level III**
4. There is no significant difference with regard to the decompression achieved, the success of nonoperative treatment, or the morbidity rate after surgical intervention comparing long tube decompression with the use of nasogastric tubes. **Level I**
5. Water soluble contrast (Gastrografin) given in the setting of partial SBO can improve bowel function (time to bowel movement [BM]), decrease length of stay, and is both therapeutic and diagnostic. **Level II**
6. In a highly selected group of patients the laparoscopic treatment of small bowel obstruction should be considered and leads to a shorter hospital length of stay. **Level II**

Definitions:

Classes of Evidence

Class I: Prospective, randomized, controlled trial (there were no Class I articles reviewed)

Class II: Clinical studies in which the data was collected prospectively, and retrospective analyses which were based on clearly reliable data. Types of studies so classified include: observational studies, cohort studies, prevalence studies, and case control studies.

Class III: Studies based on retrospectively collected data. Evidence used in this class includes clinical series, database or registry reviews, large series of case reviews, and expert opinion.

Levels of Recommendation

Level 1: This recommendation is convincingly justifiable based on the available scientific information alone. It is usually based on Class I data, however, strong Class II evidence may form the basis for a level 1 recommendation, especially if the issue does not lend itself to testing in a randomized format. Conversely, weak or contradictory Class I data may not be able to support a level 1 recommendation.

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Level 3: This recommendation is supported by available data but adequate scientific evidence is lacking. It is generally supported by Class III data. This type of recommendation is useful for educational purposes and in guiding future studies.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is identified and graded for each recommendation (see the "Major Recommendations" field).

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Appropriate management and treatment of patients with small bowel obstruction

POTENTIAL HARMS

Complications related to management/treatment

QUALIFYING STATEMENTS

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- The Eastern Association for the Surgery of Trauma (EAST) is a multi-disciplinary professional society committed to improving the care of injured patients. The Ad hoc Committee for Practice Management Guideline Development of EAST develops and disseminates evidence-based information to increase the scientific knowledge needed to enhance patient and clinical decision-making, improve health care quality, and promote efficiency in the organization of public and private systems of health care delivery. Unless specifically stated otherwise, the opinions expressed and statements made in

this publication reflect the authors' personal observations and do not imply endorsement by nor official policy of the Eastern Association for the Surgery of Trauma.

- "Clinical practice guidelines are systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances." These guidelines are not fixed protocols that must be followed, but are intended for health care professionals and providers to consider. While they identify and describe generally recommended courses of intervention, they are not presented as a substitute for the advice of a physician or other knowledgeable health care professional or provider. Individual patients may require different treatments from those specified in a given guideline. Guidelines are not entirely inclusive or exclusive of all methods of reasonable care that can obtain/produce the same results. While guidelines can be written that take into account variations in clinical settings, resources, or common patient characteristics, they cannot address the unique needs of each patient nor the combination of resources available to a particular community or health care professional or provider. Deviations from clinical practice guidelines may be justified by individual circumstances. Thus, guidelines must be applied based on individual patient needs using professional judgment.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

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ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2007

GUIDELINE DEVELOPER(S)

Eastern Association for the Surgery of Trauma - Professional Association

SOURCE(S) OF FUNDING

Eastern Association for the Surgery of Trauma (EAST)

GUIDELINE COMMITTEE

EAST Practice Parameter Workgroup for Management of Small Bowel Obstruction

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: Available in Portable Document Format (PDF) from the [Eastern Association for the Surgery of Trauma \(EAST\) Web site](#).

Print copies: Available from the Eastern Association for the Surgery of Trauma Guidelines, c/o William J. Bromberg, MD, FACS, Memorial Health University Medical Center, Savannah Surgical Group, Inc., 4700 Waters Avenue, Savannah, GA 31404; Phone: (912) 350-7412; Email: guidelines@east.org

AVAILABILITY OF COMPANION DOCUMENTS

The following is available:

- Utilizing evidence based outcome measures to develop practice management guidelines: a primer. 18 p. 2000. Available in Portable Document Format (PDF) from the [Eastern Association for the Surgery of Trauma \(EAST\) Web site](#).

PATIENT RESOURCES

None available

NGC STATUS

This NGC summary was completed by ECRI Institute on September 12, 2008.

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